December 30, 1968
P.O. Box 6352
Los Angeles,
California 90055

Mr. Brian K. Jones
1714 S. Beverly Glen Blvd.
Los Angeles, California 90024

Dear Brian:

Thanks for your request to review and comment on the Resolution of the Central Valley Regional Water Quality Control Board for the Walt Disney Productions' Mineral King Development. I am not very familiar with the biotic environment at Mineral King; however, I can offer a few general comments which should have been of some concern to Disney Productions if they truly desire to maintain or enhance the habitat of their development and its environs.

Generally, the Resolution appears to have substantially covered all of the danger areas where sanitary waste disposal is concerned. The largest problem has usually been the enforcement of the resolutions and policies once established. It is rather difficult to predict the ultimate environmental effect of assumed disposal operations and systems, and the developers are quite reticent about upgrading any system after it is put into operation.

The possibility of thermal pollution is usually not a problem in sewerage systems, especially those utilizing bacteria for breaking down the organic matter. One could reasonably assume that the sewerage effluents would not be heated above that required for optimum biologic activity or above that to assure flow in the pipes during freezing weather. Even then, heating would only be sufficient to permit continued digestion and flow through the system.

The term "thermal pollution" is very overused and misunderstood; it constitutes an emotionally charged semantic problem. Heated discharges into waterways can have either a beneficial or a detrimental effect on the environment. It depends upon the existing habitat, the time of year, the temperature regime of the ecosystem, and many other factors. An example of possible enhancing effects: for developing maximum habitat, biotic productivity and fishery enhancement, it may be quite satisfactory to have heated discharges during winter, or with low heating effects, to have the discharges utilized during dry months to provide for yearly carryover of fish food organisims. If the stream were stocked during winter months, and the waters were too warm for natural fish reproduction anyway, the additional flows could be used for enhancing the habitat and providing water for other wildlife. Therefore, an environmental study is generally required before one can determine if any discharge would be "pollution" or something else.

Another problem area to be given consideration is the mineral enrichment of the natural stream by the dissolved salts found in sewerage effluents. These salts can also provide either pollution to or enhancement of the biotic community. Sewerage effluents are usually high in nutrients which can permit rapid and extensive algae blooms during warm summer months. With the proper temperatures and salt concentrations these blooms could exist for many miles below the sewerage outfall or point of entrance into the waterway.

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However, Item 8 of the Resolution fully covers this eventuality. I would like to add that the time to correct this possibility is during the planning and design phases of development, not after the system is in operation.

The other side of the enrichment coin is the possibility of enhancement of the natural stream environment. Many mountain streams can be relatively low in nutrients for fish food organisms and sport fish growth and development oan be limited by this constraint. It is therefore possible to increase the carrying capacity of the stream by the addition of these nutrients from the treatment plant. This would enhance an existing fishery and provide additional enjoyment for the angler though a definite changed condition would exist. This possibility would also require a bit of ecological research and study of the particular stream to be enhanced.

The California Department of Fish and Game appears to favor prohibiting these discharges into the stream. This thinking certainly removes the unknowns from the problem. Perhaps, that Department has the biological data necessary to make this decision. However, without full knowledge of the existing ecology of that area, the State could be overlooking an opportunity of increased stream flow and possibly an enhanced fishery for the public.

The present "State of the Art" regarding the effects of man-made wastes on the total ecology of an area is still in its infancy, especially when one considers the length of time required for some effects to become of a serious mature. Also, engineers and planners do not seem to appreciate the need for biological concurrence in their short term developments (short term in the evolutionary sense). Again, it takes time to gather the pertinent data and it costs money. If Disney Productions is in too big a hurry to study the full effects of their development on the habitat, I would tend to agree with the recommendations of Fish and Game. Maybe we haven't won anything, but at least we haven't lost either.Perhaps Disney should be persuaded to hire an ecological consultant to determine if their proposal will have a detrimental effect on the existing ecology.

If I can be of further assistance, please don't hesitate to ask.

Sincerely,

George

George H. Matchette

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